INSTALLATION MANUAL JDW-C (Sensor Camera)

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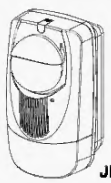
0305 Ⓐ



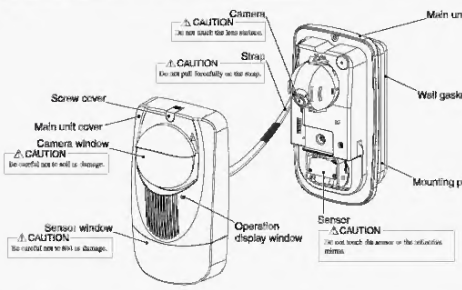
JDW-C

Accessories

Installation manual (this document) x 1
Sensor detection area adjustment sheet x 1
Manual for adjusting sensor detection area x 1
Mounting screws x 2

When you open up the package, make sure all the accessories are present.

NAMES & FUNCTIONS



SPECIFICATIONS

Model No.		JDW-C
Power		Supplied from the master station
Operating temperature range		-10 – +50 °C
Storage temperature range		-20 – +60 °C
Operating humidity range		85% (max.)
Picture element		1/3-inch color CCD
Camera angle of view (horizontal x vertical)		71.6° x 53.4° (6x5.8)
Minimum illumination		1.0 lux
Sensor operation display light		Lights up green when the sensor detects something (Can be switched OFF with the select switch)
Sensor detection method		Heat ray type
Sensor detection area		Max. 5 meters, approx. 70°
Sensor detection speed		0.3 – 1.8 m/sec.
Sensor sensitivity switching		Switchable among: three states H (high), M (medium), and L (low)
Sensor startup time		Approx. 30 sec. after power comes on
External sensor input		An external sensor can be connected and operated in either an "AND" or "OR" configuration with this unit.
Internal sensor switching		The internal body detection sensor can be controlled to be "ON" or "OFF".
Internal speaker		The internal speaker can be controlled to be "ON" or "OFF" with the speaker select switch.
Internal mic.		The mic. sensitivity can be adjusted with the mic. sensitivity volume.
Master station switch		Switchable according to the master station version.
Angle adjustment range	Camera	±50° left/right, -20° to -80° up/down (The horizontal direction is 0°.) (The left/right and up/down angles can both be changed in increments of 5°.)
	Sensor	±50° left/right, -20° to -55° up/down (The horizontal direction is 0°.) (The left/right angle can be changed in increments of 10° and the up/down angle in increments of 5°.)
Installation places		Indoors/Outdoors
Protective structure		Weather-resistant
Weight		Approx. 400 g
Dimensions (mm)		106 (W) x 182 (H) x 94 (D)

SAFETY CAUTIONS

■Precaution notation

This installation manual uses various symbols for the sake of safe usage.
The results that can occur from ignoring these indications and handling this equipment incorrectly are categorized as follows.

Icon display example

⃠ symbol indicates a prohibition. The specific reasons prohibited is drawn in or near the figure. (For the figure on the left, disassembly is prohibited.)

❗ symbol indicates behavior that is mandatory and gives directions.

⚠WARNING	This indicates that ignoring the contents of the warning and handling the equipment incorrectly can result in death or severe injury.	⚠CAUTION	This indicates that ignoring the contents of the warning and handling the equipment incorrectly can result in personal injury and/or damage to equipment.
Do not disassemble or alter.	Do not disassemble or alter this equipment. Doing so could be dangerous. Fire or electric shock could result.	Use in areas with water or high humidity is prohibited.	This product is weather resistant, but do not install it in a bathing room or other place with extremely high humidity, any place where water might get into it, or in water. Do not spray water directly on this equipment, for example with a hose. Fire, electric shock, and equipment damage can/or result.
Electric shock caution	Do not touch the main unit with damp or wet hands. Electric shock and equipment damage could result. Where existing chime wiring is used, it is possible that hazardous AC power. This can cause equipment damage and electric shock. Have the installation done by an electrical contractor, low voltage connection, or qualified personnel.	Install securely.	Install securely in a solid location so that the equipment can not drop from its own weight. Equipment falling could result in injury.

Notice

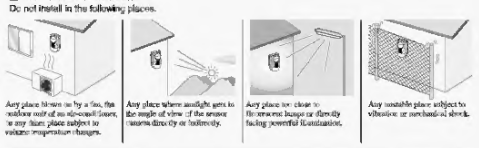
This product detects a person, provides notice, and shoots images. It is not an anti-theft device.
Aiphone does not bear responsibility for any damage incurred in the event of theft or other such incident.

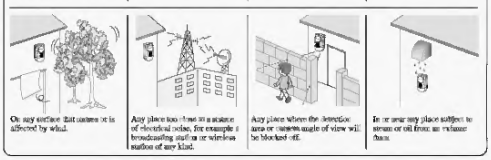
CAUTION

Installation precautions ⚠

■For correct installation

Do not install in the following places.


Any place blown on by a fan, the outdoor unit of an air-conditioner, or any place place subject to extreme temperature changes.
Any place where sunlight gets in the angle of view of the sensor camera directly or indirectly.
Any place too close to fluorescent lamps or directly facing powerful illumination.
Any unstable place subject to vibration or mechanical shock.


On any surface that causes it to be affected by wind.
Any place too close to a source of electrical noise, for example a broadcasting station or wireless station of any kind.
Any place where the detection area or camera angle of view will be blocked off.
In or near any place subject to steam or oil from an exhaust fan.

Connection precautions ⚠

- Use two conductor wire from the JDW-C to the master station. Do not use coaxial cable.
- When using two cameras, always use one two conductor wire for each camera. If you connect two cameras with one multi-conductor wire, the cameras may not operate correctly.
- If the wiring is routed together with high voltage AC wiring, other power wiring, wiring for electric ai lights, and telephone lines, this can disrupt the picture and sound quality and cause malfunction. Either use separate conduits or run wires in separate paths from each other.
- When existing wiring is used, for some type of wiring, this system may not operate correctly. Changing the wiring restores normal operation.

TROUBLESHOOTING

①The unit does not operate.	• No power is being supplied from the master station.	• Wire the master station correctly to supply power.
	• The wiring is incorrect or a line is open or shorted.	• Wire correctly. (See "MOUNTING AND CONNECTION".)
	• The unit was wired to the master station with power applied.	• Keep the power OFF until the wiring is completed.
	• The master station select switch setting is reversed.	• Set "A" and "B" correctly. (See "SETTINGS".)
②The system does not detect people.	• The detection zone is not correctly set.	• Check the detection zone and camera angle of view area and install so that people are detected. (See "ADJUSTMENTS".)
	• People are passing nearly directly under the sensor camera	• Adjust the up/down angle to point them so that they are detected.
	• People are coming directly at the camera.	• This is not a breakdown. Because of the characteristics of a heat ray type station it may have difficulty detecting people coming directly at the camera. As much as possible, install in such a way that people cut across the detection area. (See "ADJUSTMENTS".)
		• Connect an external sensor in "OR mode" so that people can sense the detection area. (See "SETTINGS".)
	• The detection zone is cut off by glass.	• This is not a breakdown. A heat ray type sensor cannot detect objects through glass. Install in a place where the detection area is not cut off by the glass. (See "MOUNTING AND CONNECTION".)
	• With the external sensor input function in "AND mode", people are only detected by the main sensor or by the external sensor but not by both.	• This is not a breakdown. Set the detection zone for each sensor so that people are detected by both sensors. (See "SETTINGS".)
	• The internal sensor switch is "OFF".	• Switch "ON" the internal sensor switch.
③Sound cannot be heard from the unit.	• The speaker select switch is "OFF".	• Switch "ON" the speaker select switch.
	• The master station select switch is "B".	• Switch the master station select switch to "A". (Sound cannot be heard from the unit when the master station is JA-2MED or JA-2MCD.)
④Sound cannot be heard from the master station.	• The wiring is incorrect or a line is open or shorted.	• Wire correctly. (See "MOUNTING AND CONNECTION".)
	• The mic. sensitivity volume is at the "Low" side.	• Turn the mic. sensitivity volume to the "High" side. (See "SETTINGS".)
⑤There is howling.	• The sensor camera is installed too close to the master station.	• This is not a breakdown. Install the sensor camera further from the master station or turn the mic. sensitivity volume to the "Low" side until there is no howling.
⑥The sensor is detecting but the detected objects are not displayed on the screen.	• There is a dog or cat or some small animal in the detection area	• Set the sensor sensitivity switch to "L (Low)". (See "SETTINGS".)
		• Recommend to connect an external sensor and use it in "AND mode". (See "SETTINGS".)
	• There is something that moves in the detection area, for example a flag or tree blowing in the wind, or there are sudden temperature changes.	• Set the sensor sensitivity switch to "L (Low)". (See "SETTINGS".)
		• Either move the moving object or the object causing the sudden temperature changes outside the detection area or change the area setting. (See "SETTINGS".)
	• The external sensor area does not match the camera angle of view.	• Adjust the external sensor area so that it matches the camera angle of view. (See "ADJUSTMENTS" and "SETTINGS".)
⑦The picture is dark, filtered, or not displayed at all.	• The wiring is incorrect or a line is open or shorted.	• Check the wiring and wire correctly. (See "MOUNTING AND CONNECTION".)
	• The camera window is dirty.	• Clean the lens with lens cleaner or with a clean, soft, damp cloth.
	• The outside temperature dropped suddenly and the camera window has fogged up.	• When the temperatures inside and outside the product even out, the camera window returns to normal.
⑧There are white lines on the screen.	• There is a bright light source in the camera angle of view.	• Either remove the light source, adjust the angle so that the light does not come into the angle of view, or change the mounting location of the main unit. (See "ADJUSTMENTS".)
⑨The screen is flickering.	• There is a fluorescent lamp nearby.	• This is not a breakdown. Block out the light from the fluorescent lamp.

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of two years after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship and whether or not the product is within the warranty. This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory. This warranty does not cover batteries or damage caused by batteries used in connection with the unit. This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

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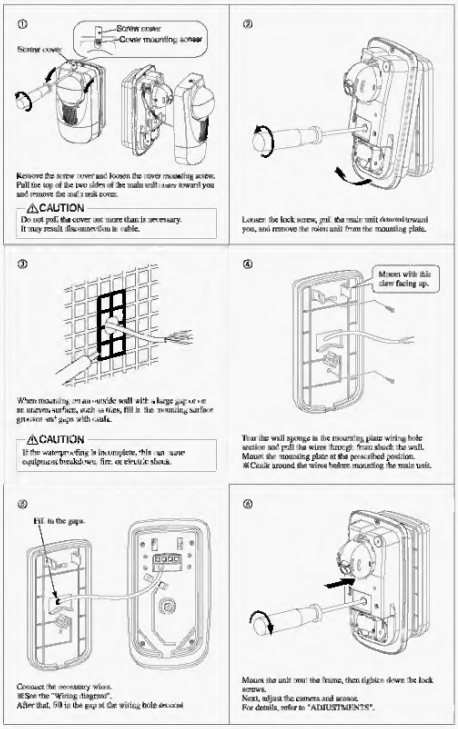
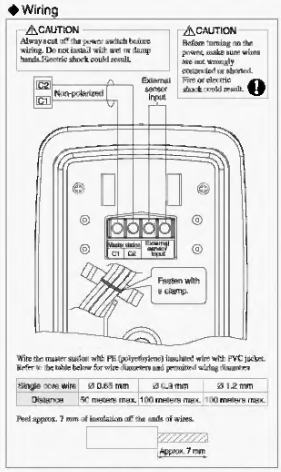
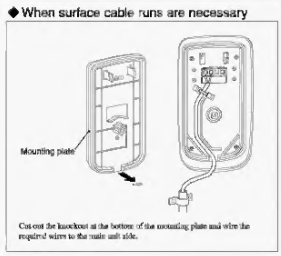
MOUNTING AND CONNECTION


①
Screw cover
Cover mounting screw
Remove the screw cover and loosen the cover mounting screw. Pull the top of the two sides of the main unit cover toward you and remove the unit's main cover.
⚠CAUTION
Do not pull the cover out more than is necessary. It may result disconnection in cable.
②
Loosen the lock screw, pull the main unit forward toward you, and remove the main unit from the mounting plate.
③
When mounting on an outside wall with a large gap or on an uneven surface, such as tiles, fill in the mounting surface to even out gaps with caulk.
⚠CAUTION
If the waterproofing is incomplete, this can cause equipment breakdown, fire, or electric shock.
④
Mount with the claw facing up.
Tear the wall sponge in the mounting plate wiring hole section and pull the wires through from inside the wall. Mount the mounting plate at the prescribed position.
※Caulk around the wires before mounting the main unit.
⑤
Fill in the gaps.
Connect the necessary wires.
※See the "Wiring diagram".
After that, fit in the gap of the wiring hole section.
⑥
Mount the unit over the frame, then tighten down the lock screws.
Next, adjust the camera and sensor.
For details, refer to "ADJUSTMENTS".

◆Wiring

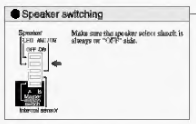

⚠CAUTION
Always cut off the power switch before wiring. Do not install with wet or damp hands. Electric shock could result.
⚠CAUTION
Before turning on the power, make sure wires are not wrongly connected or shorted. Fire or electric shock could result.
C2
C1
Non-polarized
External sensor input
Master station
C1
C2
External sensor input
Fasten with a clamp.
Wire the master station with PE (polyethylene) insulated wire with PVC jacket. Refer to the table below for wire diameters and permitted wiring distances
Single core wire
ø 0.65 mm
ø 0.9 mm
ø 1.2 mm
Distance
50 meters max.
100 meters max.
100 meters max.
Peel approx. 7 mm of insulation off the ends of wires.
Approx. 7 mm

◆When surface cable runs are necessary



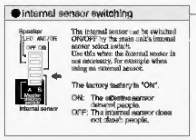
SETTINGS

●Speaker switching



Make sure the speaker select switch is always on "OFF" side.

●Internal sensor switching

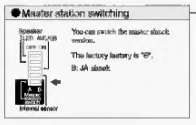


The internal sensor can be switched ON/OFF by the main unit's internal sensor select switch.
Use this when the internal sensor is not necessary, for example when using an external sensor.

The factory factory is "ON".

ON: The internal sensor detects people.
OFF: The internal sensor does not detect people.

●Master station switching

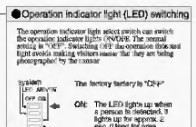


You can switch the master station's ringtone.

The factory factory is "B".

B: 2A signal

●Operation indicator light (LED) switching



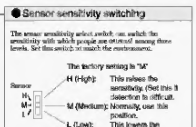
The operation indicator light select switch can switch the operation indicator light ON/OFF. The factory setting is "OFF". Switching ON the operation indicator light avoids making visitors aware that they are being photographed by the sensor.

The factory factory is "OFF".

ON: The LED lights up when a person is detected. It lights up for approx. 2 min. (Used for area adjustment.)

OFF: The LED does not light up. (This is the normal position for use.)

●Sensor sensitivity switching



The sensor sensitivity select switch can switch the sensitivity with which people are detected among three levels. Set this switch to match the environment.

The factory setting is "M".

H (High): This raises the sensitivity. (Set this to selection to difficult.

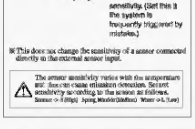
M (Medium): Normally, use this position.

L (Low): This lowers the sensitivity. (Set this if the system is frequently triggered by mistakes.)

※This does not change the sensitivity of a sensor connected directly to the external sensor input.

The sensor sensitivity varies with the temperature and therefore cause mistaken detection. Select sensitivity according to the actual conditions.
Sensor ← (High) Approximate (Medium) Wider (Low)

●Mic. sensitivity



The intercall mic. enables the user to hear outside sounds from the master station. The volume can be adjusted with the mic. sensitivity volume.

The factory setting is "Medium".

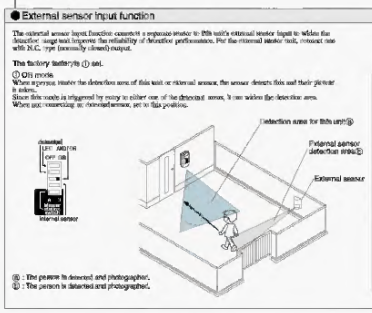
High: Raises the volume.
Low: Lowers the volume.

●External sensor input function

The external sensor input function connects a separate sensor to this unit's external sensor input to widen the detection range and improve the reliability of detection performance. Per the external sensor unit, connect one with N.C. type (normally closed) output.

The factory factory is ①.

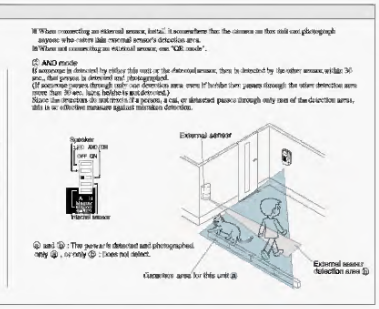
① OR mode
When a person inside the detection area of this unit or external sensor, the sensor detects this and their picture is taken.
Since this mode is triggered by entry to either one of the detected areas, it can widen the detection area.
When not connecting an external sensor, set to this position.



③ : The person is detected and photographed.
⑤ : The person is detected and photographed.

※When connecting an external sensor, install it somewhere that the camera on this unit can photograph anyone who enters into external sensor's detection area.
※When not connecting an external sensor, use "OR mode".

② AND mode
If someone is detected by either this unit or the external sensor, then is detected by the other sensor within 30 sec., that person is recorded and photographed.
(If someone passes through only one detection area even if he/she then passes through the other detection area more than 30 sec. later, he/she is not detected.)
Since the intention do not work if a person, a cat, or detected passes through only one of the detection areas, this is an effective measure against mistaken detection.



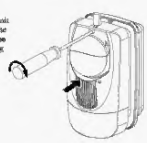
④ and ⑤ : The person is detected and photographed.
only ④ , or only ⑤ : Does not detect.

ADJUSTMENTS

①Adjusting the camera direction:
The camera moves 50° to the left and to the right.
(It moves in 5° by a step.)
The camera moves 35° down.
(It moves in 5° by a step.)
②Adjusting the sensor direction:
The sensor moves 50° to the left and to the right.
(It moves in 10° by a step.)
The sensor moves 35° down.
(It moves in 5° by a step.)

⚠Caution:
Adjust the sensor direction with holding the plastic area on the top of the sensor, NOT with touching the reflector plate or P.C. board of the sensor. Touching the sensor with wet or damp hands, could cause malfunction or breakdown.

③When the camera and sensor adjustments are complete, put the main unit cover on securely from the front and tighten down the main unit cover mounting screws.

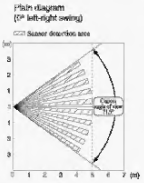


◆Detection area and camera angle of view

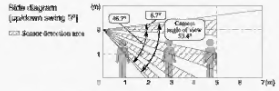
Angle adjustment range		Left/right	Up/down
	Camera	50° (5° increments)	35° (5° increments)
	Sensor	50° (10° increments)	35° (5° increments)

Camera angle of view	Horizontal angle of view	Vertical angle of view
	71.5°	53.4°

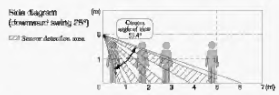
Plain diagram
(50° left-right swing)



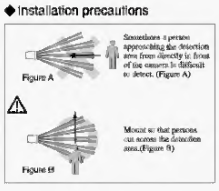
Side diagram
(up/down swing: 70°)



Side diagram
(front/rear: swing: 270°)



◆Installation precautions



Somewhere a person approaching the detection area from directly in front of the camera is difficult to detect. (Figure A)

Mount so that persons run across the detection area.(Figure B)

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